**AMENDMENTS**

In the claims:

Claim 1 (Canceled).

2. (Currently Amended) A three-dimensional structure estimation apparatus which measures a distance to an object, comprising:

a plurality of cameras for producing images of the object from different viewing angles, the cameras having different resolutions from each other such that pixel units of the images are different in the amount of object represented thereby;

conversion means for converting at least one of the images outputted from said plurality of cameras such that the resolutions with which the object is represented in each image coincide with each other~~the pixel units of all images are equal in the amount of object represented thereby~~; and

a depth ~~image~~ information production section for processing the images using triangulation to calculate a distance to the object.

3. (Currently Amended) A three-dimensional structure estimation apparatus which measures a distance to an object, comprising:

a plurality of first cameras for producing images of the object from different viewing angles, the first cameras having different resolutions from each other such that pixel units of the images are different in the amount of object represented thereby;

a plurality of second cameras for producing images of the object from different viewing angles, the second cameras having different visual fields from each other such that pixel units of the images are different in the amount of object represented thereby;

conversion means for converting at least one of the images outputted from said first cameras and at least one of the images outputted from said second cameras such that the resolutions with which the object is represented

in each image coincide with each other ~~the pixel units of all images are equal in the amount of object represented thereby~~; and

a depth ~~image~~ information production section for processing the images using triangulation to calculate a distance to the object.


Claim 4 (Canceled).


5. (Currently Amended) A three-dimensional structure estimation apparatus which measures a distance to an object, comprising:

a plurality of cameras for producing images of the object from different viewing angles, the cameras having different resolutions from each other such that pixel units of the images are different in the amount of object represented thereby;

conversion means for converting at least one of the images produced by said cameras the resolutions with which the object is represented in each image coincide with each other ~~such that the pixel units of all images are equal in the amount of object represented thereby~~, the conversion means converting the at least one image by selecting from among a set of samples of the at least one image that are sampled beginning at successive positions in the at least one image; and

a depth ~~image~~ information production section for processing the images using triangulation to calculate a distance to the object.


6. (Currently Amended) A three-dimensional structure estimation apparatus which measures a distance to an object, comprising:

a plurality of first cameras for producing images of the object from different viewing angles, the first cameras having different resolutions from each other such that pixel units of the images are different in the amount of object represented thereby;

a plurality of second cameras for producing images of the object from different viewing angles, the second cameras having different visual fields from

each other such that pixel units of the images are different in the amount of object represented thereby;

conversion means for converting at least one of the images outputted from said first cameras and at least one of the images outputted from said second cameras such that <u>the resolutions with which the object is represented in each image coincide with each other</u> ~~the pixel units of all images are equal in the amount of object represented thereby~~, the conversion means converting each of the at least one images by selecting from among sets of samples of each of the at least one images that are sampled beginning at successive positions in each of the at least one images; and

a depth ~~image~~ <u>information</u> production section for processing the images using triangulation to calculate a distance to the object.

7. (Currently Amended) A three-dimensional structure estimation apparatus which measures a distance to an object, comprising:

a plurality of cameras for producing images of the object from different viewing angles, the cameras having different resolutions from each other such that pixel units of the images are different in the amount of object represented thereby;

a conversion unit for converting at least one of the images outputted from said plurality of cameras such that <u>the resolutions with which the object is represented in each image coincide with each other</u> ~~the pixel units of all images are equal in the amount of object represented thereby~~; and

a depth ~~image~~ <u>information</u> production section for processing the images using triangulation to calculate a distance to the object.

8. (Currently Amended) A three-dimensional structure estimation apparatus which measures a distance to an object, comprising:

a plurality of first cameras for producing images of the object from different viewing angles, the first cameras having different resolutions from each other such that pixel units of the images are different in the amount of object represented thereby;

a plurality of second cameras for producing images of the object from different viewing angles, the second cameras having different visual fields from each other such that pixel units of the images are different in the amount of object represented thereby;

a conversion unit for converting at least one of the images outputted from said first cameras and at least one of the images outputted from said second cameras such that <u>the resolutions with which the object is represented in each image coincide with each other</u> ~~the pixel units of all images are equal in the amount of object represented thereby~~; and

a depth ~~image~~ <u>information</u> production section for processing the images using triangulation to calculate a distance to the object.

9. (Currently Amended) A three-dimensional structure estimation apparatus which measures a distance to an object, comprising:

a plurality of cameras for producing images of the object from different viewing angles, the cameras having different resolutions from each other such that pixel units of the images are different in the amount of object represented thereby;

a conversion unit for converting at least one of the images produced by said cameras such that the <u>resolutions with which the object is represented in each image coincide with each other</u> ~~pixel units of all images are equal in the amount of object represented thereby~~, the conversion means converting the at least one image by selecting from among a set of samples of the at least one image that are sampled beginning at successive positions in the at least one image; and

a depth ~~image~~ <u>information</u> production section for processing the images using triangulation to calculate a distance to the object.

10. (Currently Amended) A three-dimensional structure estimation apparatus which measures a distance to an object, comprising:

a plurality of first cameras for producing images of the object from different viewing angles, the first cameras having different resolutions from each

other such that pixel units of the images are different in the amount of object represented thereby;

a plurality of second cameras for producing images of the object from different viewing angles, the second cameras having different visual fields from each other such that pixel units of the images are different in the amount of object represented thereby;

a conversion unit for converting at least one of the images outputted from said first cameras and at least one of the images outputted from said second cameras such that <u>the resolutions with which the object is represented in each image coincide with each other</u> ~~the pixel units of all images are equal in the amount of object represented thereby~~, the conversion means converting each of the at least one images by selecting from among sets of samples of each of the at least one images that are sampled beginning at successive positions in each of the at least one images; and

a depth ~~image~~ <u>information</u> production section for processing the images using triangulation to calculate a distance to the object.

11. (Currently Amended) The apparatus claimed in claim 2, wherein the conversion means samples images such that the <u>resolution</u> ~~pixel units~~ of <u>the</u> sampled images ~~represent an amount of object represented by~~ <u>is approximately the same as</u> ~~pixel units of~~ <u>the resolution of</u> an image having a lowest resolution.

12. (Previously Added) The apparatus claimed in claim 2, wherein the conversion means interpolates images such that the <u>resolution</u> ~~pixel units~~ of <u>the</u> interpolated images ~~represent an amount of object represented by~~ <u>is approximately the same as</u> ~~pixel units of~~ <u>the resolution of</u> an image having a highest resolution.

13. (Currently Amended) The apparatus claimed in claim 3, wherein the conversion means samples images such that the <u>resolution</u> ~~pixel units~~ of <u>the</u> sampled images ~~represent an amount of object represented by~~ <u>is approximately the same as</u> ~~pixel units of~~ <u>the resolution of</u> an image having a lowest resolution.

14. (Currently Amended) The apparatus claimed in claim 3, wherein the conversion means interpolates images such that the resolution ~~pixel units~~ of the interpolated images ~~represent an amount of object represented by~~ is approximately the same as ~~pixel units of~~ the resolution of an image having a highest resolution.

15. (Currently Amended) The apparatus claimed in claim 7, wherein the conversion unit samples images such that the resolution ~~pixel units~~ of the sampled images ~~represent an amount of object represented by~~ is approximately the same as ~~pixel units of~~ the resolution of an image having a lowest resolution.

16. (Currently Amended) The apparatus claimed in claim 7, wherein the conversion unit interpolates images such that the resolution ~~pixel units~~ of the interpolated images ~~represent an amount of object represented by~~ is approximately the same as ~~pixel units of~~ the resolution of an image having a highest resolution.

17. (Currently Amended) The apparatus claimed in claim 8, wherein the conversion unit samples images such that the resolution ~~pixel units~~ of the sampled images ~~represent an amount of object represented by~~ is approximately the same as ~~pixel units of~~ the resolution of an image having a lowest resolution.

18. (Currently Amended) The apparatus claimed in claim 8, wherein the conversion unit interpolates images such that the resolution ~~pixel units~~ of the interpolated images ~~represent an amount of object represented by~~ is approximately the same as ~~pixel units of~~ the resolution of an image having a highest resolution.

19. (New) A method for measuring a distance to an object, comprising:
producing images using a plurality of cameras at different viewing angles, at least one of the having a resolution or field of view such that pixel units of

the images of the respective cameras are different in the amount of object represented thereby;

converting at least one of the images produced by the plurality of cameras such that the resolutions with which the object is represented in each image coincide with each other; and

processing the images after said conversion using triangulation to calculate a distance to the object.